WHAT IS CLAIMED IS:

1. A method of reducing or preventing maternal to fetal transmission of a microorganism, the method comprising:

selecting a pregnant individual diagnosed as being infected with a microorganism; and

administering to the birth canal of the individual a composition comprising a cholesterol-sequestering agent, wherein the composition is administered prior to a vaginal birth of a fetus, and wherein an amount of the cholesterol-sequestering agent effective to reduce or prevent maternal to fetal transmission of the microorganism remains present in the birth canal during the vaginal birth.

2. The method of claim 1, wherein the cholesterol-sequestering agent is a cyclodextrin.

3. The method of claim 2, wherein the cyclodextrin is a beta-cyclodextrin.

4. The method of claim 3, wherein the beta-cyclodextrin is 2-OH-propyl-beta-cyclodextrin.

5. The method of claim 1, wherein the microorganism is a virus.

6. The method of claim 5, wherein the virus is an envelope virus.

7. The method of claim 6, wherein the envelope virus is a human immunodeficiency virus (HIV).

8. The method of claim 6, wherein the envelope virus is a human herpes virus.

9. The method of claim 6, wherein the envelope virus is a hepatitis virus.

10. The method of claim 6, wherein the envelope virus is a pox virus.

11. The method of claim 6, wherein the envelope virus is an influenza or a parainfluenza virus.

12. The method of claim 6, wherein the envelope virus is a human T-cell lymphotropic virus (HTLV).

13. The method of claim 1, wherein the microorganism enters a cell of a host by endocytosis during at least a portion of its life cycle.

14. The method of claim 13, wherein the microorganism is a bacterium.

15. The method of claim 13, wherein the microorganism is a mycobacterium.

16. The method of claim 13, wherein the microorganism is a fungus.

17. The method of claim 13, wherein the microorganism is a protozoan.

18. The method of claim 1, wherein the composition is formulated as a cream, gel, or lubricant.

19. The method of claim 1, wherein the composition is administered to the birth canal at least one hour before birth.

20. The method of claim 1, wherein the composition is administered to the birth canal at least six hours before birth.

21. The method of claim 1, wherein the composition is administered to the birth canal at least 12 hours before birth.

22. The method of claim 1, wherein the composition is administered to the birth canal less than 72 hours before birth.

23. The method of claim 1, wherein the composition is administered to the birth canal less than 48 hours before birth.

24. The method of claim 1, wherein the composition is administered to the birth canal less than 24 hours before birth.

25. The method of claim 1, wherein a plurality of administrations of the composition are applied to the birth canal within a period of one week prior to the birth.

26. The method of claim 1, wherein a plurality of administrations of the composition are applied to the birth canal within a period of 24 hours prior to the birth.

27. The method of claim 6, further comprising administering to the individual an amount of antiviral agent effective to reduce viral load in the peripheral blood of the individual.

28. The method of claim 27, wherein the antiviral agent is a nucleoside reverse transcriptase inhibitor, a non-nucleoside reverse transcriptase inhibitor, or a protease inhibitor.

29. The method of claim 6, further comprising intravenously administering to the individual prior to the birth an amount of cholesterol-sequestering agent effective to reduce viral load in the individual.

30. The method of claim 1, wherein after cutting of the umbilical cord a newborn is contacted with an amount of the cholesterol-sequestering agent effective to reduce or prevent transmission of the microorganism to the newborn.

31. A method of reducing or preventing maternal to fetal transmission of a microorganism, the method comprising:

selecting a pregnant individual diagnosed as being infected with a microorganism; and

administering to the individual a composition comprising a cholesterol-sequestering agent, wherein the composition is administered to the individual at a site of a surgical incision for a cesarean section birth of a fetus, and wherein an amount of the cholesterol-sequestering agent that is effective to reduce or prevent maternal to fetal transmission of the microorganism remains present at the site during the cesarean section birth.

32. A method of treating blood or a blood product, the method comprising:

providing a sample comprising blood or a blood product; and

contacting the sample *in vitro* with a composition comprising an amount of a cholesterol-sequestering agent effective to reduce the load of a microorganism, if present, in the sample, wherein the sample is maintained after the contacting step in a sterile vessel.

33. The method of claim 32, wherein the cholesterol-sequestering agent is a cyclodextrin.

34. The method of claim 33, wherein the cyclodextrin is a beta-cyclodextrin.

35. The method of claim 34, wherein the beta-cyclodextrin is 2-OH-propyl-beta-cyclodextrin.

36. The method of claim 32, wherein the microorganism is a virus.

37. The method of claim 36, wherein the virus is an envelope virus.

38. The method of claim 37, wherein the envelope virus is a human immunodeficiency virus (HIV).

39. The method of claim 37, wherein the envelope virus is a human herpes virus.

40. The method of claim 37, wherein the envelope virus is a hepatitis virus.

41. The method of claim 37, wherein the envelope virus is a pox virus.

42. The method of claim 37, wherein the envelope virus is an influenza or a parainfluenza virus.

43. The method of claim 37, wherein the envelope virus is a human T-cell lymphotropic virus (HTLV).

44. The method of claim 32, wherein the microorganism enters a cell of a host by endocytosis during at least a portion of its life cycle.

45. The method of claim 44, wherein the microorganism is a bacterium.

46. The method of claim 44, wherein the microorganism is a mycobacterium.

47. The method of claim 44, wherein the microorganism is a fungus.

48. The method of claim 44, wherein the microorganism is a protozoan.

49. The method of claim 32, wherein the sample comprises whole blood.

50. The method of claim 49, wherein the whole blood is human whole blood.

51. The method of claim 50, further comprising introducing the sample into an individual following the contacting of the sample with the composition.

52. The method of claim 51, further comprising removing or depleting white blood cells from the sample prior to introducing the sample into the individual.

53. The method of claim 37, wherein the sample is identified as containing an envelope virus.

54. The method of claim 37, further comprising testing the sample for the presence of the envelope virus following the contacting with the composition.

55. The method of claim 32, wherein the sample comprises plasma.

56. The method of claim 32, wherein the sample comprises serum.

57. The method of claim 32, wherein the sample comprises enriched red blood cells.

58. The method of claim 32, wherein the sample comprises enriched platelets.

59. The method of claim 32, wherein the sample comprises a protein purified from whole blood.

60. A composition comprising a cholesterol-sequestering agent and an amount of blood or a blood product suitable for administration to an individual having a blood-related disorder or deficiency, wherein the composition is maintained in a sterile vessel.

61. The composition of claim 60, wherein the composition comprises whole blood.

62. The composition of claim 61, wherein the whole blood is human whole blood.

63. The composition of claim 60, wherein the composition comprises plasma.

64. The composition of claim 60, wherein the composition comprises serum.

65. The composition of claim 60, wherein the composition comprises enriched red blood cells.

66. The composition of claim 60, wherein the composition comprises enriched platelets.

67. The composition of claim 60, wherein the composition comprises a protein purified from whole blood.

68. The composition of claim 60, further comprising an agent that promotes the storage of the blood or blood product.

69. The composition of claim 68, wherein the composition comprises whole blood.

70. The composition of claim 69, wherein the agent is an anticoagulant.

71. The composition of claim 70, wherein the composition is frozen.

72. The composition of claim 60, wherein the composition comprises a purified immunoglobulin.

73. The composition of claim 60, wherein the composition comprises a purified clotting factor.